

Work Order ID 61189

August 11, 2010 7:43:26 AM



Page 1

Item ID: D350-636-012

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube RH

Start Date: 8/11/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/20/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: CY Date: 10/8/11 Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
----------	--------------

D2750	Rev F
-------	-------

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 005

8/10/08/11

HJ for BG 10-8-31

B61189

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all-entries

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1- Pick D2600-3 Bent								
	2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750								
	3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.								
	4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting								
	5- Drill fwd step holes using DT9616. Ensure proper positioning.								
	6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B) ***ONLY DRILL ONE SIDE OF FWD SADDLE HOLES USING DT8150***								
	7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. ***SECOND SIDE***								
	8- Clecko DT9642 and drill fwd saddle holes on second side, ensure proper positioning.								
	9-Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail C to 0.500" (8 holes per side)								
	10-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to								

ALUM 10-08-13



10-8-16

W/O:		WORK ORDER CHANGES					
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

0.297".

11-Open up holes of Detail A to 0.297" (total of 2 holes per side)

12-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left
from bending as per QSI 004

A/R Aluminum Rod batch: ☐ M114877 ----- BE 10-8-16

13-Grind welds flush as per Dwg D2750 BE 10-8-17 ----- :

DD 10-8-16

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

8/10/08/17

FD

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/10/08/17

FD

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

DP 10-8-17

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 - BE 10-08-17

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

0.00



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☐ Sikaflex-291 batch: M115114 ☐ ☐ ☐
exp. date: 10-1-30

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R ☐ Aluminum Rod batch: M114877

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

BE 10-08-17

BE 10-08-17

BE 10/08/19

BE 10/08/19

BE 10/08/19

BE 10/08/19

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



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dwg D2750

12-Deburr holes

8/10/08/24

0.00

0.00

8/10/08/24

170



QC

Memo

Quality Control

QC10- Inspect visual per QSI004- ground welds

180



QC

Memo

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

8/10/08/24



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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.	0.00 0.00		=> M 10/08/25		1	Ø		
200 Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: 1:15pm OVEN TEMPERATURE: 320°C FINISH TIME: 1:45pm	0.00 0.00		=> M 10/08/25		1	Ø		
210 QC Quality Control	QC3- Inspect Part Finish Memo Inspect for foreign object per QSI 024	0.00 0.00				1		Ø 10-8-07	

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--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220

0.00



HandFinishing

=> HP 10/08/27

1

0

HandFinish

Memo

0.00

Hand Finishing

Install inserts as per dwg D2750

230

0.00



HandFinishing

0.00

HandFinish

Memo

Hand Finishing

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3"
batch: 01A

3-Install blade fitting D3488-042, wearshoes and ground handling hardware as
per dwg D2750

SIKA FLEX 241

BATCH: M11511J

EXP DATE: 1101

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: M114189

5-Coat all exposed fasteners with "LPS Procyon"

batch: M115596

xl

0

=> HP 10/08/30

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Reference:

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240 	QC5- Inspect part completeness to step on W/O	0.00							
QC Quality Control	Memo	0.00				<i>m</i>	<i>10</i>	<i>08</i>	<i>30</i> ①
250 	Pick Kit	0.00							
Packaging Packaging	Memo	0.00							<i>10/8/31</i> <i>SP</i>
260 	QC4- 100% Inspect kits for completeness	0.00							
QC Quality Control	Memo	0.00							①

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Package as per PPP D350-636-012								
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

Handwritten signature

10/09/01 *Handwritten signature*
02/01/01

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Picklist Print

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Page 1

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Parent Item Name: Skidtube RH



Start Date: 8/11/10

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Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07-13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4, 13 DD verified by: EC
 IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec IPP Rev: O
 10.06.22 revise seq 110 DD verf: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS4-1032-225		Purchased	No			220	Each	5,945.000	38	38			



Insert

Location

Loc Qty

Loc Code

PK011

5945

110768

5945

AN3C5A

Purchased

No

230

Each

1,464.000

34

34

x38 JH 10/08/27

Bolt

Location

Loc Qty

Loc Code

ST350

1454

114330

11

115015

743

115108

300

115316

300

115371

100

ST351

10

113121

10

AN3C6A

Purchased

No

230

Each

425.0000

4

4

x34 JH 10/08/27

BOLT

Location

Loc Qty

Loc Code

ST351

425

111982

425

xJH 10/08/27

W/O:		WORK ORDER CHANGES					
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Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

177.0000

4

4



BOLT

Location

Loc Qty

Loc Code

FG

2

103964

2

ST344

175

111649

2

114653

1

114784

47

114941

75

115030

50

x3 H 10/08/27

x1 H 10/08/27

10/8/31/27

AN8C21A

Purchased

No

250

Each

57.0000

2

2



BOLT

Location

Loc Qty

Loc Code

ST345

57

113558

17

114653

40

2

AN8C35A

Purchased

No

230

Each

53.0000

1

1



BOLT

Location

Loc Qty

Loc Code

FP

1

110847

1

ST346

52

114442

27

115188

25

x1 H 10/08/27

W/O:		WORK ORDER CHANGES					
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Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 R Purchased No

230 Each 29.0000 38 38



washer



Location

Loc Qty

Loc Code

ST245

29

M115000

107534

29

x38 M 10/08/27

AN960C816L Purchased No

230 Each 21.0000 1 1



WASHER NAS1149C0832R



M114915 10/8/31 S

Location

Loc Qty

Loc Code

ST348

21

110584

18

111424

3

AN960C816L Purchased No

250 Each 21.0000 1 2



WASHER *NAS 1149C08332R *



M 10/08/27

Location

Loc Qty

Loc Code

ST348

21

110584

18

111424

3

M114915

D2741 Manufactured No

250 Each 21.0000 1 1



Blade, 350 Skidtube



10/8/31 S

Location

Loc Qty

Loc Code

ST466

21

55905

1

57949

20

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured No

230

Each

169.0000

8

8



Bushing

Location

Loc Qty

Loc Code

ST023

169

52311

5

59112

164

D3488-042

Manufactured No

230

Each

17.0000

1

1



Blade Fitting Assembly, RH

Location

Loc Qty

Loc Code

FP008

17

53918

5

59643

12

D3492-041

Manufactured No

230

Each

93.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP013

93

59114

24

59420

69

B61311

x8 10/08/22

x1 10/08/22

x4 10/08/22
x4 10/08/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 11, 2010 7:43:25 AM

Work Order ID: 61189

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3492-043

Manufactured No

230

Each

51.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP

2

B61207

x8 JU 10/08/27

54682

2

FP013

49

59117

1

59190

4

59421

14

60712

30

D3493-1

Manufactured No

250

Each

48.0000

2

2



Washer

Location

Loc Qty

Loc Code

ST065

48

59127

18

60873

30

2

10/0/31 SP

D3532-1

Manufactured No

250

Each

31.0000

2

2



Spacer

Location

Loc Qty

Loc Code

ST068

31

59426

9

60510

22

2

10/0/31 SP

D3535-25

Manufactured No

230

Each

24.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

24

59623

24

10/08/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 6

August 11, 2010 7:43:25 AM

Work Order ID: 61189



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3536-25

Manufactured No

230

Each

29.0000

1

1



Gasket



Location

Loc Qty

Loc Code

FP12

29

58820

5

59625

24

x1 10/08/27

D3537-1

Manufactured No

230

Each

55.0000

3

3



Wearpad



Location

Loc Qty

Loc Code

FP

1

55465

1

FP17

54

57713

3

59593

3

60192

48

*

x3 10/08/27

D3631-1

Manufactured No

230

Each

571.0000

8

8



Washer



Location

Loc Qty

Loc Code

ST072

297

60755

297

ST076

274

52693

206

54388

68

x8 10/08/27

August 11, 2010 7:43:25 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 11, 2010 7:43:25 AM

Work Order ID: 61189

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

230

Each

1,011.000

4

4



Phenolic Washer

Location

Loc Qty

Loc Code

ST077

993

51674

5

52505

988

ST117

18

34470

18

X4 M 10/08/27

D3672-13

Purchased No

250

Each

842.0000

2



Phenolic Washer

Location

Loc Qty

Loc Code

ST077

842

54363

842

2

D3791-1

Manufactured No

230

Each

20.0000

1

1



Wearplate

Location

Loc Qty

Loc Code

FP17

20

58573

11

59626

9

X1 M 10/08/27

D3793-1

Manufactured No

230

Each

15.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

15

59151

2

59630

13

X1 M 10/08/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 11, 2010 7:43:25 AM

Work Order ID: 61189

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3793-3
Wearshoe

Manufactured No 230 Each 13.0000 1 1

Location Loc Qty Loc Code

FP18 12
59631 12
FP19 1
57947 1

10/08/27

D3794-1
Gasket

Manufactured No 230 Each 19.0000 1 1

Location Loc Qty Loc Code

FP010 19
57942 18
59627 1

10/08/27

D3794-3
Gasket

Manufactured No 230 Each 24.0000 1 1

Location Loc Qty Loc Code

FP10 12
60826 12
FP18 12
56066 11
59153 1

10/08/27

MS21043-6
NUT

Purchased No 230 Each 726.0000 4 4

Location Loc Qty Loc Code

ST301 726
112314 726

10/08/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 11, 2010 7:43:25 AM

Work Order ID: 61189

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

230

Each

56.0000

1

1



NUT

Location

Loc Qty

Loc Code

ST303

56

113845

7

114934

49

MS21083C8

Purchased

No

250

Each

56.0000

1



NUT

Location

Loc Qty

Loc Code

ST303

56

113845

7

114934

49

NAS1611-010

Purchased

No

230

Each

267.0000

8

8



O-RING

Location

Loc Qty

Loc Code

FP

267

110715

100

110915

167

NAS1611-013

Purchased

No

230

Each

67.0000

8

8



O-RING

Location

Loc Qty

Loc Code

FP

67

114451

51

114496

16



VI 10/08/27
W 10/08/27

VI

PTO
W 10/08/27

VS 10/08/27

Dart Aerospace Ltd

W/O: 61189		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/08/21	230	Replace NAS 1611-010 "O" Ring with D2594-3 "O" Rings / B59358	gll	10/08/21	58		S 10/08/21

Part No: D350-636-012 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O: 61189		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/08/27	230	Replace NAS 1611-010 "O" Ring with DZ594-3 "O" Rings /B59358	JL	10/08/27	x8		S 10/08/31

Part No: D350-636-012 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 11, 2010 7:43:26 AM

Work Order ID: 61189

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110

Each

16.0000

1

1



Extrusion Bent

Location

Loc Qty

Loc Code

LG

16

59410

16

110

Each

35.0000

1

1

D2744

Manufactured No



Cap

Location

Loc Qty

Loc Code

LG

35

59198

35

160

Each

0.0000

1

1

D2739

Manufactured No



350 I Beam

D2743

Manufactured No



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

299

50281

10

57953

2

59111

287

160

Each

54.0000

4

4

D3490-3

Manufactured No



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

54

59229

14

60294

40

AWM 10-08-13

BE 10-08-16
B 61256 4 BE 10-08-17

8 BE 10/08/18

4 BE 10/08/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 11

August 11, 2010 7:43:26 AM

Work Order ID: 61189



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3490-1

Manufactured No

160

Each

19.0000

4

4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

19

59424

19

B 61217

4

BE 10 08/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

5

4

3

2

1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELOMENT, LH
	1			D2750-2	SKIDTUBE WELOMENT, RH
		1		D2750-3	SKIDTUBE WELOMENT, LH
			1	D2750-4	SKIDTUBE WELOMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

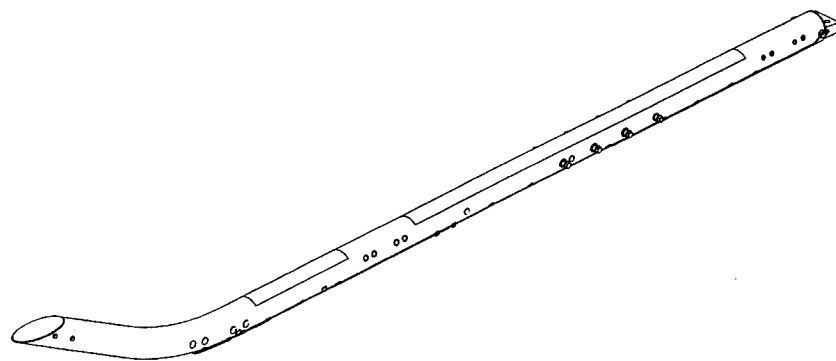
- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES (Ø0.297) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

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C21018/11

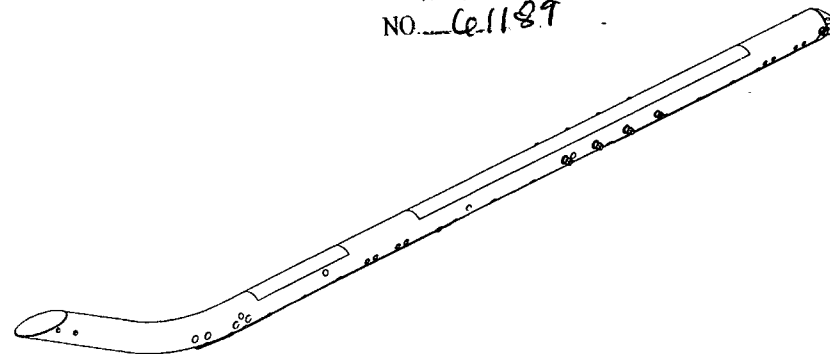
RELEASED
6-27-22

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-1/-3 (ZN C8-1); D3794-1/-3 REPLACES D3536-1/-3 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	PA	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RA		
CHECKED	AK	DRAWING NO.	REV. F
MFG. APPR.	AK	D2750	SHEET 1 OF 11
APPROVED	AK	TITLE	SCALE
DE APPR.	AK	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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 NO. 61189



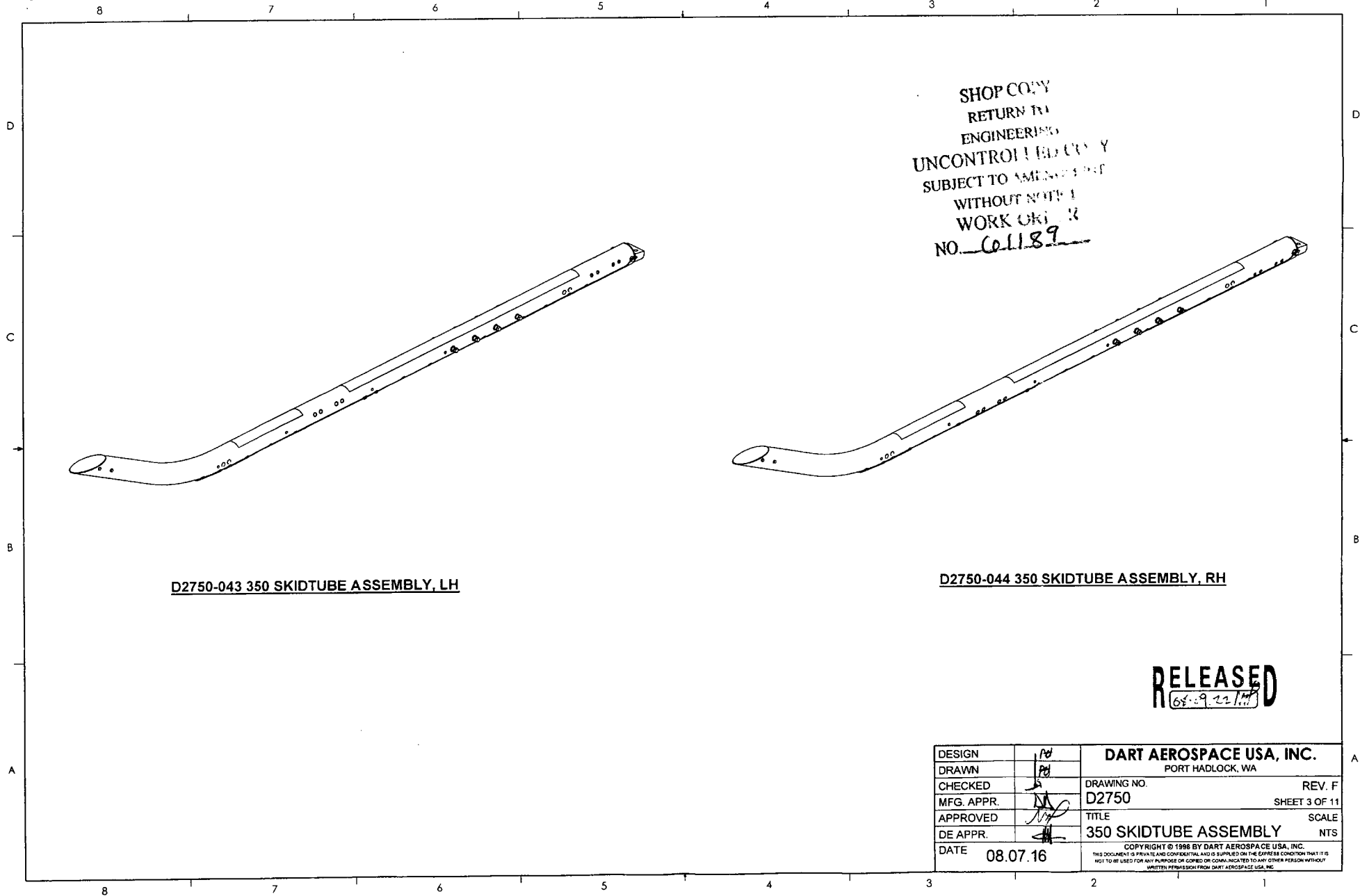
D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

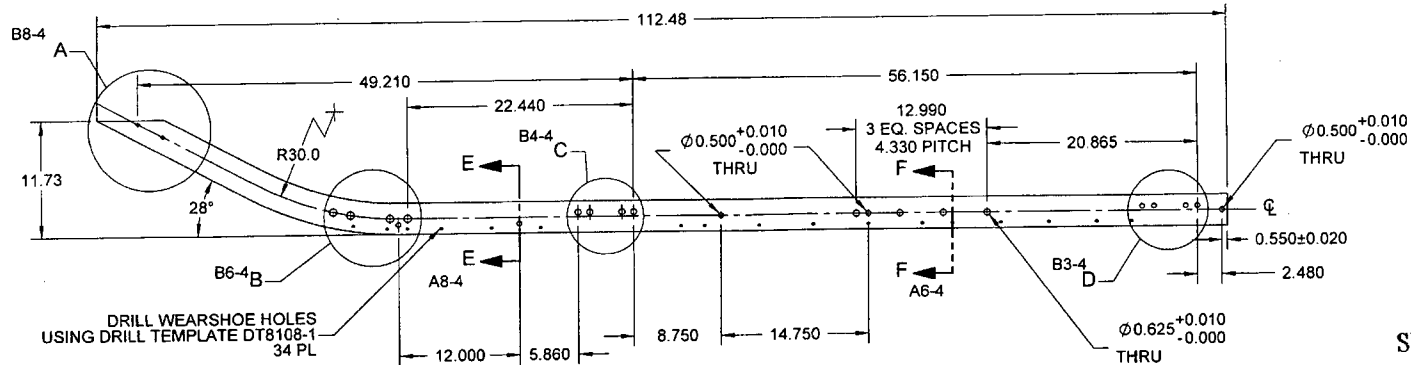
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 18-09-22/11

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DRAWN	PA	PORT HADLOCK, WA	
CHECKED	PA	DRAWING NO. D2750	REV. F
MFG. APPR.	PA	SHEET 2 OF 11	
APPROVED	PA	TITLE	SCALE
DE APPR.	PA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	



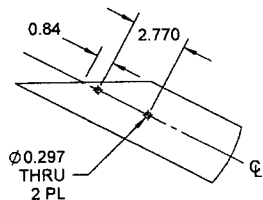
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NO. 6-1189

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68-09-22/11/16

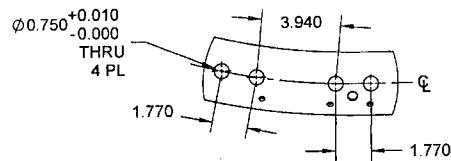


D2750-1 LH SKIDTUBE

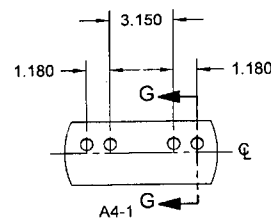
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 61189



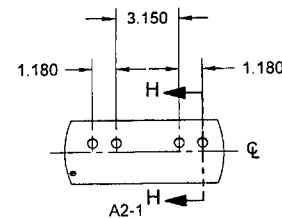
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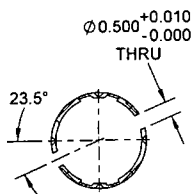
DETAIL B
SCALE 2X



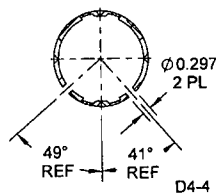
DETAIL C
SCALE 2X



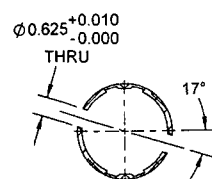
DETAIL D
SCALE 2X



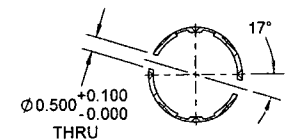
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



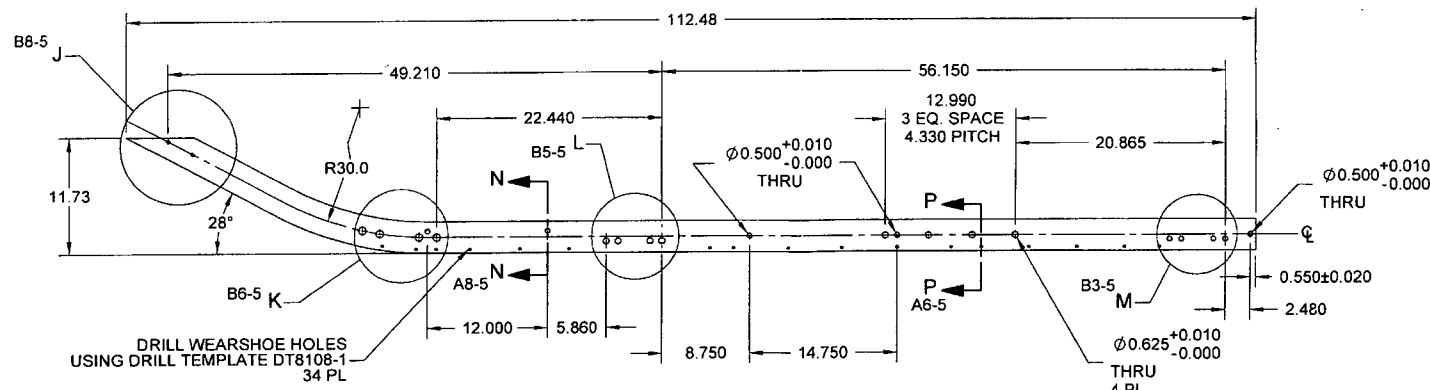
SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

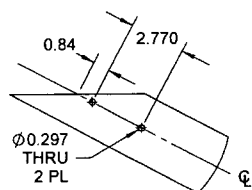
RELEASED
06-09-22-1989

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CHECKED	PM	DRAWING NO. D2750	REV. F
MFG. APPR.	PM	SHEET 4 OF 11	
APPROVED	PM	TITLE	SCALE
DE APPR.	PM	350 SKIDTUBE ASSEMBLY	NTS
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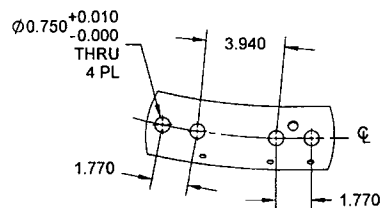


D2750-2 RH SKIDTUBE

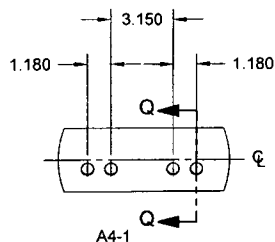
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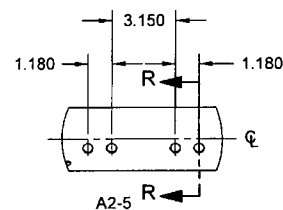
DETAIL J
SCALE 2X



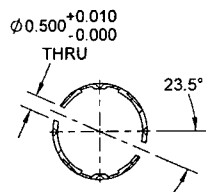
DETAIL K
SCALE 2X



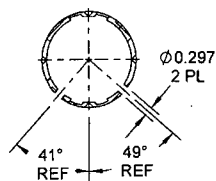
DETAIL L
SCALE 2X



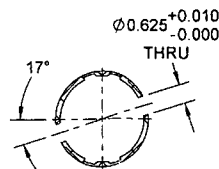
DETAIL M
SCALE 2X



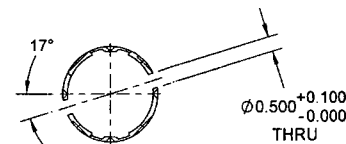
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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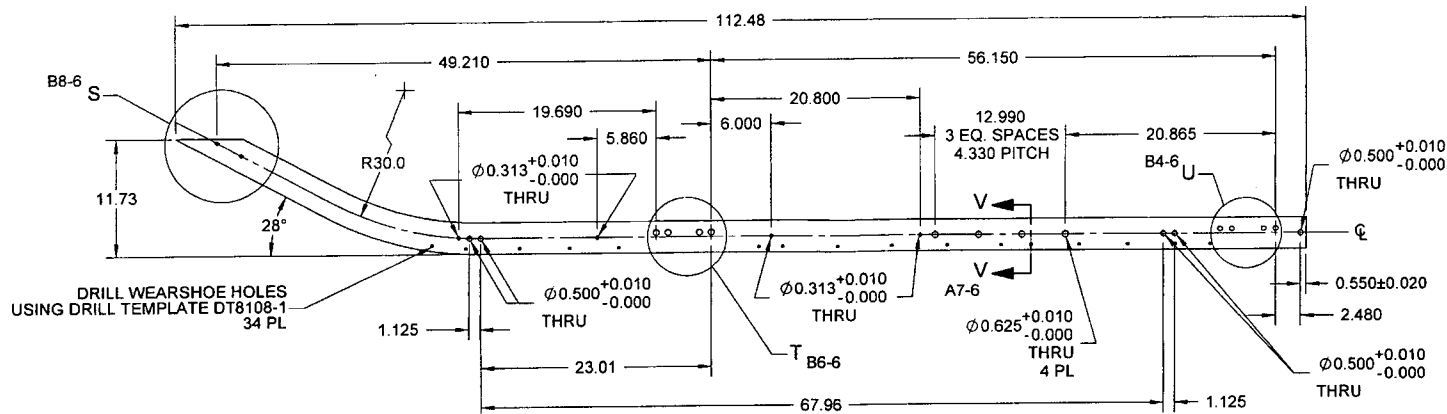
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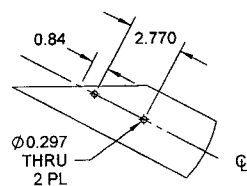
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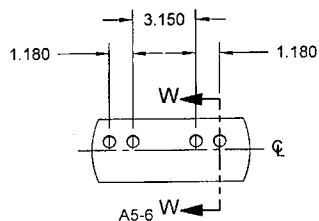
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**D2750-3 LH SKIDTUBE**

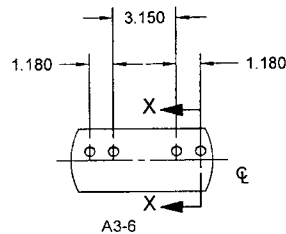
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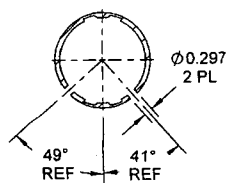
DETAIL S D8-6
SCALE 2X



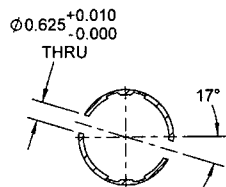
DETAIL T C5-6
SCALE 2X



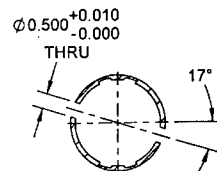
DETAIL U D3-6
SCALE 2X



SECTION V-V C4-6
SCALE 3X, 17 PL



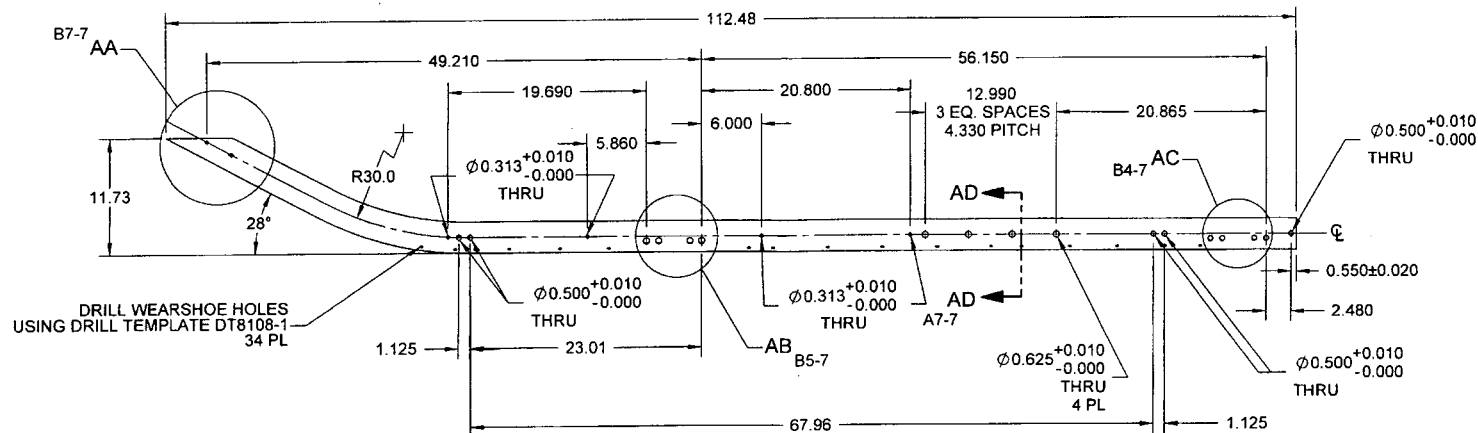
SECTION W-W B6-6
SCALE 3X, 4 PL



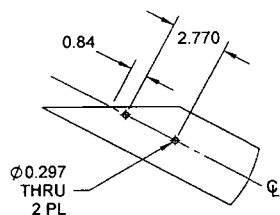
SECTION X-X B4-6
SCALE 3X, 4 PL

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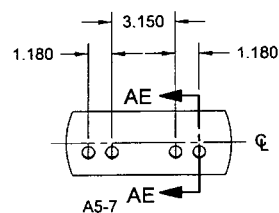
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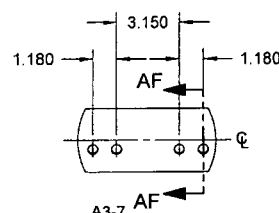
D2750-4 RH SKIDTUBE



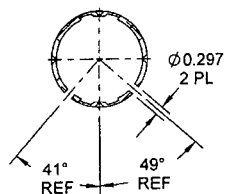
DETAIL AA
SCALE 2X



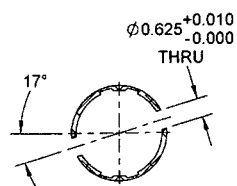
DETAIL AB
SCALE 2X



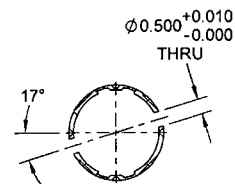
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

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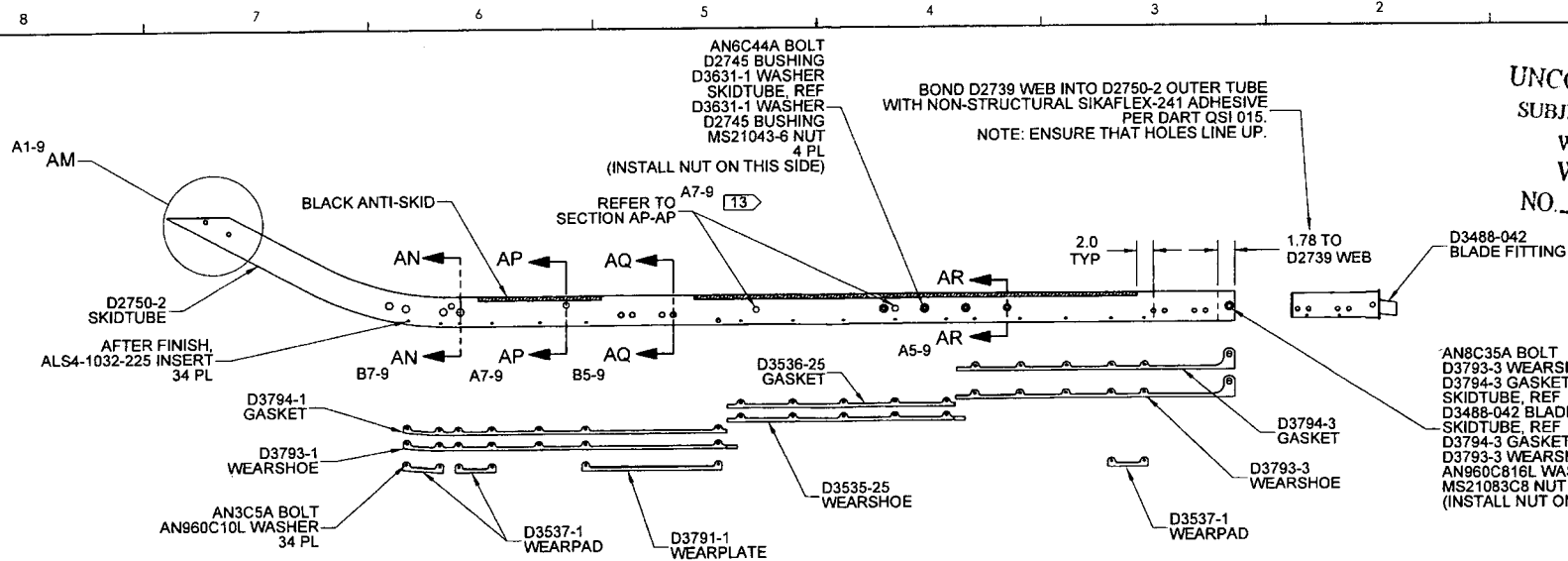
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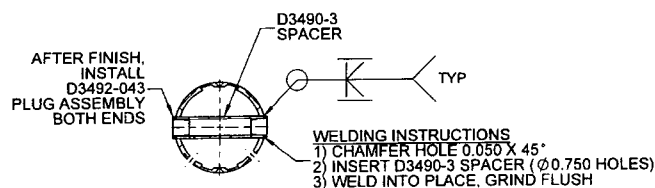
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ENGINEER

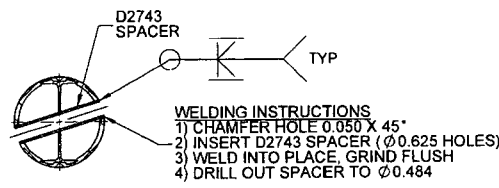
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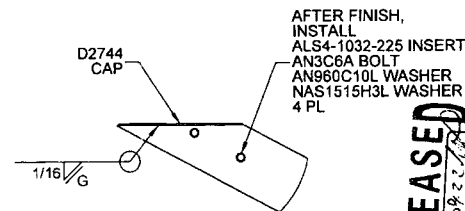
D2750-042 350 SKIDTUBE ASSEMBLY, RH



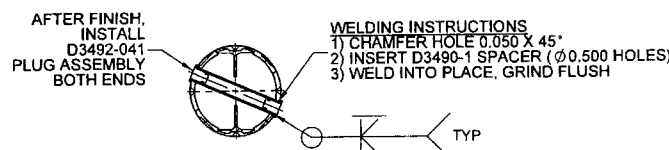
SECTION AN-AN
SCALE 3X, 4 PL



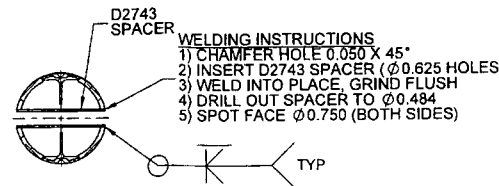
SECTION AQ-AQ
SCALE 3X, 4 PL



DETAIL AM
SCALE 2X



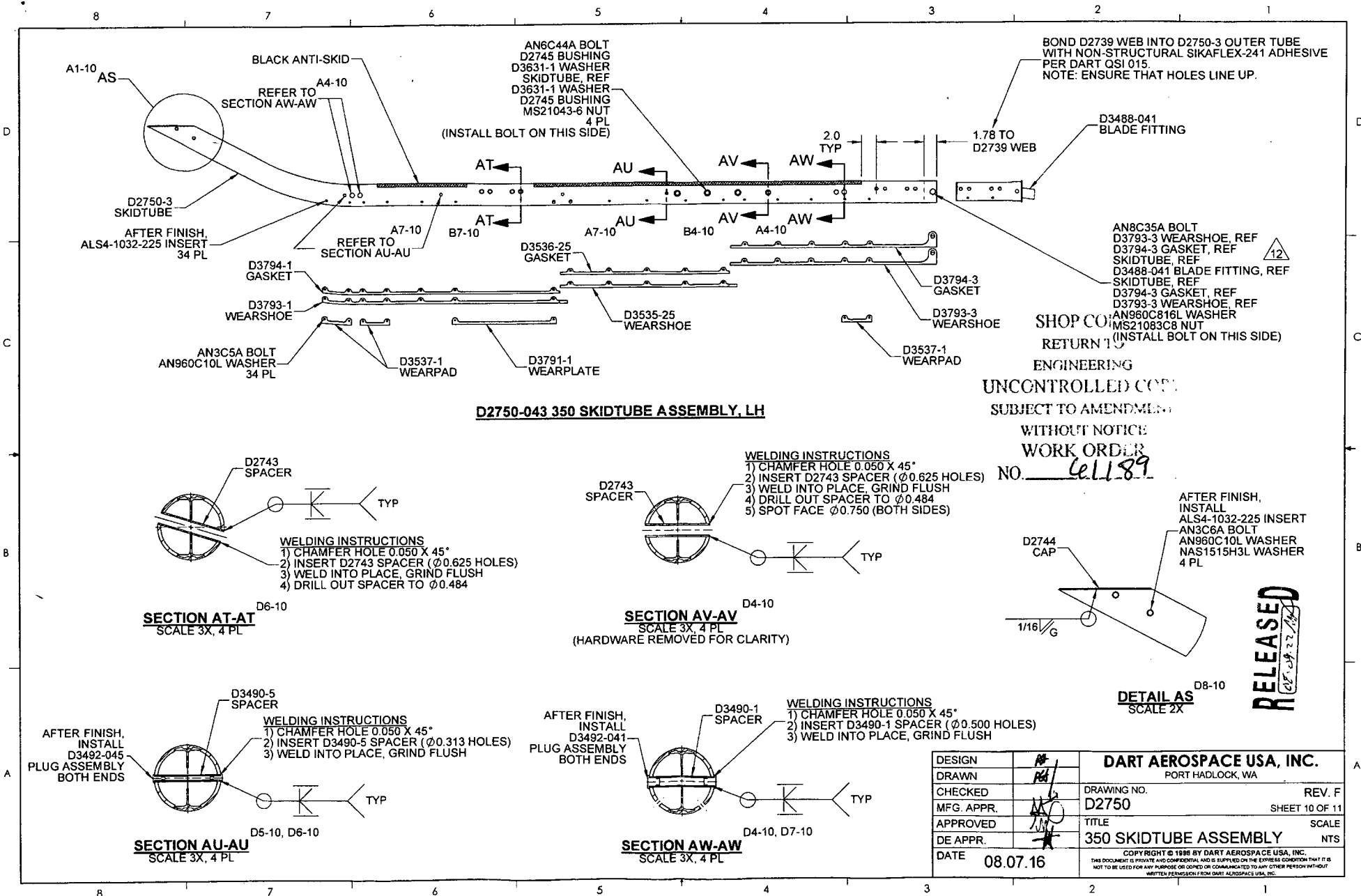
SECTION AP-AP
SCALE 3X, 4 PL



SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

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A1-11
BA

BLACK ANTI-SKID

REFER TO
SECTION BE-BE

A4-11

AN6C44A BOLT
D2745 BUSHING
D3631-1 WASHER
SKIDTUBE, REF
D3631-1 WASHER
D2745 BUSHING
MS21043-6 NUT
4 PL
(INSTALL NUT ON THIS SIDE)

BOND D2739 WEB INTO D2750-4 OUTER TUBE
WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE
PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP.

D2750-4
SKIDTUBE

AFTER FINISH,
ALS4-1032-225 INSERT
34 PL

REFER TO
SECTION BC-BC

A7-11

D3794-1
GASKETD3793-1
WEARSHOE

AN3C5A BOLT
AN960C10L WASHER
34 PL

D3537-1
WEARPADD3791-1
WEARPLATED3536-25
GASKETD3535-25
WEARSHOED3537-1
WEARPAD

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D3488-042
BLADE FITTING

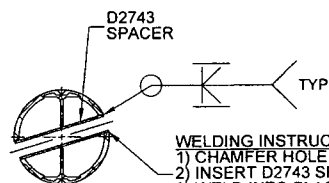
AN8C35A BOLT
D3793-3 WEARSHOE, REF
D3794-3 GASKET, REF
SKIDTUBE, REF
D3488-042 BLADE FITTING, REF
SKIDTUBE, REF
D3794-3 GASKET, REF
D3793-3 WEARSHOE, REF
AN960C816L WASHER
MS21083C8 NUT
(INSTALL NUT ON THIS SIDE)

D2750-044 350 SKIDTUBE ASSEMBLY, RH

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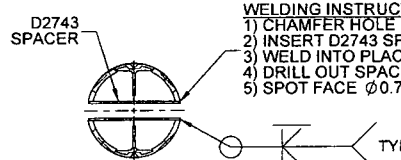
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**SECTION BB-BB**

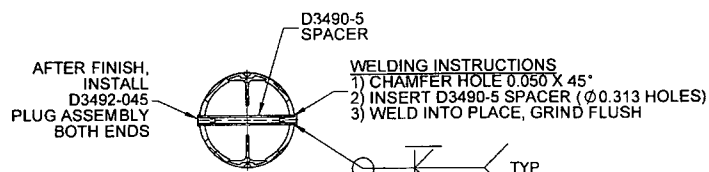
SCALE 3X, 4 PL

D6-11

**SECTION BD-BD**SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

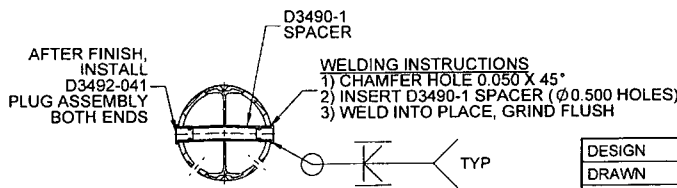
WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D2743 SPACER (Ø0.625 HOLES)
3) WELD INTO PLACE, GRIND FLUSH
4) DRILL OUT SPACER TO Ø0.484
5) SPOT FACE Ø0.750 (BOTH SIDES)

D4-11

**SECTION BC-BC**

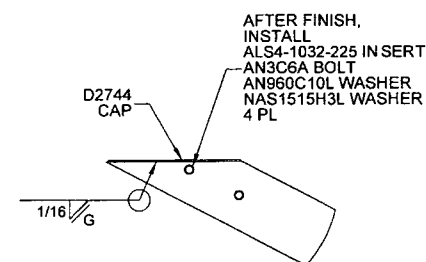
SCALE 3X, 4 PL

D5-11, C6-11

**SECTION BE-BE**

SCALE 3X, 4 PL

D4-11, D7-11

**DETAIL BA**

SCALE 2X

D8-11

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NO. 236

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 60988
Part number: D350-636-012
Description: 350 skid tube
Welding Process: Tig[☒] Mig[☐]
Base material: Aluminum
Current: AC[☒] DC[☐]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[☐]
Penetration: pass[☒] fail[☐]

UNACCEPTABLE

Cracks: pass[☒] fail[☐]
Undercut: pass[☒] fail[☐]
Pin holes: pass[☒] fail[☐]
Overlap (cold lap): pass[☒] fail[☐]
Porosity (surface): pass[☒] fail[☐]
Coloration: pass[☒] fail[☐]

Qualifier [Signature] Date of Test Coupon 10.08.12

Welder [Signature] Date of Test Coupon 10.08.12

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

